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Staff Education for Enhancing Providers' Knowledge of Long Acting Injectables (LAIs) Antipsychotics in the Outpatient Mental Health Clinic

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Walden University

College of Nursing

This is to certify that the doctoral study by

Belinda Okoruwa

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

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Walden University
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Executive Summary: Staff Education Project
Staff Education for Enhancing Providers' Knowledge of Long Acting Injectables (LAIs)
Antipsychotics in the Outpatient Mental Health Clinic

by

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MS, Walden University, 2021

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Executive Summary Submitted in Partial Fulfillment
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Summary

This doctoral study is a quality-improvement educational program in an outpatient mental health clinic designed to address the underutilization of long-acting injectable (LAI) antipsychotics due to gaps in providers' knowledge. The project question centered on whether structured education on LAIs antipsychotics increases providers' knowledge in an outpatient mental health setting. The purpose of this project is to increase LAI antipsychotic utilization by educating providers about the advantages, safety, and appropriate administration to promote consistent implementation.

In this project, I used a single-group pre/post design including six participants, incorporating a 12-item questionnaire and 5-point Likert scale questions (*Not at all/Somewhat/Very Much*). A PowerPoint education module was sent to participants via email; the pretest was conducted before viewing the module; and the posttest was administered thereafter. A formative analysis was performed using Microsoft Excel to calculate mean percentages and a p value. Knowledge increased from 4.67/7 (66.7%) to 7/7 (100%), $p = .022$. The education provided on LAI antipsychotics was found to be successful. Recommendations for maintaining sustainability include incorporating the educational module into new hire onboarding process and annual refreshers, monthly audits, and designation of LAI champions. Positive social changes resulting from this program include improved adherence to treatment and reduced unnecessary relapses and hospitalizations for schizophrenia patients. Addressing the knowledge gap enhances evidence-based nursing care, ensures access to LAIs for all eligible patients, and strengthens continuity and safety during care transitions for improved patient outcomes.

Background

Schizophrenia is a chronic, relapsing condition that impacts approximately 20 million individuals globally, necessitating prolonged pharmacological treatment and coordinated outpatient care to mitigate hospitalization and mortality rates (Schwartz et al., 2022). Despite these statistics, numerous outpatient mental health clinics do not routinely discuss or offer LAI antipsychotics to eligible patients due to clinicians' knowledge barriers (Schwartz et al., 2022). The American Psychiatric Association (2020) suggested that evidence-based practice guidelines recommend the utilization of LAIs antipsychotics and shared decision-making as a maintenance strategy in the treatment of schizophrenia. Therefore, clinicians must be proficient in identifying patients and safely administering products throughout the transition of care (American Psychiatric Association, 2020).

The project question was an exploration of whether or not structured education on LAI antipsychotics enhances providers' knowledge in an outpatient mental health setting. The purpose of the project was to create educational materials that would enhance providers' understanding of the use of LAI antipsychotics. Therefore, the gap in practice was addressed by designing educational materials for clinicians focused on increasing their knowledge of LAI antipsychotics in the management of schizophrenia.

I conducted a comprehensive literature review using the Walden University Library, CINAHL, APA PsycInfo, MEDLINE/PubMed, and Cochrane Library to address the practice gap. The term employed was *long-acting injectable antipsychotic*. The initial search yielded approximately 100 records; after filtering for English, peer-reviewed

articles from 2020 to 2025, and eliminating duplicates, 40 articles were retained. Using title screening based on inclusion and exclusion criteria, I identified 10 studies as directly pertinent to the research question.

A study within this literature review summarized the clinical advantages of LAIs compared to oral antipsychotics, focusing on their effectiveness in preventing relapse and reducing hospitalization rates, thereby supporting the design of the educational content for clinicians (Vita et al., 2024). A literature review included an examination of the reasons for the underutilization of LAI antipsychotics in schizophrenia treatment, identifying modifiable barriers such as knowledge gaps, unclear roles in screening and counseling, and clinic logistics (Schwartz et al., 2022). These modifiers support the selection of a structured educational program to address the practice gap. Further syntheses emphasize the necessity of addressing the need for LAI antipsychotics during the initial stages of psychosis, rather than restricting them to a last resort treatment option, thereby further emphasizing the need for an educational initiative for clinicians (Lian et al., 2022). The evidence was strong, showing how important it is for clinicians to increase the utilization of LAI antipsychotics in the treatment of schizophrenia, and showing how a structured educational program may help achieve this goal.

Staff Education Project Development

The project began with a brief, targeted, needs assessment to understand how clinicians at the outpatient clinic were identifying candidates for LAI antipsychotics. This background analysis reviewed existing policies and workflows, the presence (or absence) of prompts in routine visits, and clinicians' self-reported comfort with screening,

counseling, and administration. A signed site agreement was executed to authorize the quality-improvement activity on-site. In accordance with institutional guidance, Walden University determined that formal Institutional Review Board (IRB) review was not required for this quality improvement project. The practice gap identified was an inconsistent knowledge regarding LAIs, which directly informed the learning objectives and scope of the educational materials.

Six clinicians working in an outpatient mental health clinic were recruited to participate in this project via an initial email invitation (see Appendix A). The participants were three mental health nurse practitioners (PMHNP), two mental health therapists, and one licensed practical nurse (LPN). See demographic details of participants on Table 1. The invitation described the project purpose, voluntary participation, and a contact questions. Each clinician was asked to create a participant ID number to preserve anonymity. The materials used for this project consist of a 12 item/ 5-point Likert scale pre- and posttest questionnaire (Appendix B) and a self-learn PowerPoint educational module. These materials were sent to participants via email for completion. Participants were asked to print out the completed questionnaire, placed in a sealed envelope, and dropped in the secure collection box at the front desk. Materials were collected for data analysis.

A formative analysis of the data collected from all six participants was conducted using the Microsoft Excel sheet. The pre- and posttest knowledge scores (total of seven points) of each participant were entered in two columns on the sheets and converted to percentages. The mean pretest was 4.67/7(66.7%) and the mean posttest was 7/7(100%),

showing an increase of knowledge of 2.33 points per participants (Figure 1). A paired t test was also conducted using excel, and it shows a p value= 0.022. This indicates that the improvement in knowledge is statistically significant due to the training the participants received. During analysis, it was also noted that five participants showed improvement in their knowledge due to educational training. However, one participant was already at ceiling (7/7) before the training. All participants posttest score of 7/7(100%) reflects a ceiling effect which is consistent with strong immediate learning.

Table 1

Participants Demographics

Years in outpatient MH Practice/ Role	<1 year <i>n</i> (%)	1-3 years <i>n</i> (%)	4-10 years <i>n</i> (%)	>10 years <i>n</i> (%)	Total <i>n</i>	Total %
PMHNP	1(16.7)	2(33.3)	0(0.00)	0(0.00)	3	50.0
Mental health therapist	0(0.0)	1(16.7)	0(0.00)	1(16.7)	2	33.3
LPN	0(0.0)	0(0.00%)	1(16.7)	0(0.00)	1	16.7
Total	1(16.7)	3(50.0)	1(16.7)	1(16.7)	6	100

Figure 1

Analysis of the Educational Module Impact on Knowledge

Participant	Total score	Pretest	Pretest %	Posttest	Posttest %
1	7	4	57.14	7	100
2	7	4	57.14	7	100
3	7	2	28.57	7	100
4	7	6	85.71	7	100
5	7	5	71.43	7	100
6	7	7	100	7	100
<i>M</i>			66.70		100
Paired t test p value = 0.02235					

Results

The postimplementation results reveal an increase in providers' knowledge on LAIs antipsychotics, as evidenced by a 2.33-point increase in mean knowledge and a p value of 0.022 (Figure 1). This finding demonstrates that a structured educational module program can rapidly increase providers' knowledge of the use of LAI antipsychotics in the treatment of schizophrenia. Increased provider knowledge of the use of LAIs antipsychotics may result in improved adherence and fewer relapses, which can be tracked through frequent clinic chart audits and outcome measures (Vita et al., 2024). The project's educational program findings also support the use of this module during new hire onboarding and as an annual refresher session for clinicians.

There were some limitations to the findings. First, the project used a single group pre-/posttest design, with no control group. Due to the single group design, participants' knowledge may have increased as a result of taking the test numerous times or trying harder because they know they are being observed, rather than just because of the training module. Another limitation was a small sample size. The project included six participants, resulting in a limited sample size that limits the findings' generalizability to a larger population. The final limitation connected with the findings is the measurement approach used. The pre- and posttest questionnaires were not fully evaluated to ensure that crucial educational aspects were not overlooked. Furthermore, the posttest results of all participants were 100%, making it difficult to identify whether there is a residual deficit in knowledge regarding the use of LAI antipsychotics (DeVellis & Thorpe, 2021).

Despite these limitations, the education program would be useful beyond the local clinic setting because the educational module offers a standardized process for clinicians to implement in practice, which could be sustained over time. Furthermore, the inclusion of the educational module into new hire onboarding program and annual training may help clinicians prevent losing their knowledge and skills, hence supporting sustainability (Luo et al., 2024).

Conclusions

The DNP project positively impacts the organization because the findings show that the structured educational module significantly increase provider's knowledge about the utilization of LAIs antipsychotics for the treating schizophrenia, potentially leading to better adherence and fewer relapses.

Recommendation

Based on the findings of this educational program project, several recommendations can be used by the organization to maintain its sustainability. The organization should incorporate the educational module into the new-hire onboarding program and schedule annual refreshers that include competency checks (Luo et al., 2024). The organization should also incorporate the NOB screening checklist prompt into the EHR to assist clinicians in offering LAI antipsychotic treatment as an option in the management of schizophrenia (Zhang et al., 2024). Organizations should also conduct monthly audits to track offers, acceptances, timely follow-ups, and relapse visits in the previous 90 days. These monthly audits should be used as quality metrics and displayed on a dashboard to improve performance (Ragsdale et al., 2020). The designation of a LAI

champion in the organization would ensure that clinicians receive regular training on how to store LAI antipsychotic medications and proper administration techniques, which can improve skill integration and motivation (Schwartz et al., 2022).

Implication for Nursing Practice

The DNP projects improve nursing practices by promoting standardized practice on how clinicians should identify eligible patients, counsel patients, and safely administer LAI antipsychotics as a treatment modality for schizophrenia. These standardized steps are coordinated by nurses routinely in outpatient settings. Nurses could also lead quality improvement in an organization by involving in monthly chart audits to track LAI offers, intake and timely follow up. Nurses as leaders must be engaged members of the health care team in improving quality and safety (Tschannen et al., 2021).

Implication for Positive Social Change, diversity, Equity, and Inclusion

The education program module supports the utilization of LAI antipsychotics for all eligible outpatients with schizophrenia. This promotes positive social change by improving adherence to treatment, reducing relapse, and hospitalization rates. It also promotes positive social change that supports mental health stability and increases functional abilities needed to maintain employment, housing, family roles, and community participation (Vita et al., 2024). The administration of LAI antipsychotics requires less frequent dosing, which reduces burden on patients by eliminating daily pills intake and necessitating transportation for refills, which may affect patients experiencing social and structure barriers to receiving health care services.

The program also supports the proactive offering of LAI antipsychotics to all eligible patients using simple plain language and shared decision-making during counselling, which supports diversity, equity and inclusion while standardizing access regardless of race, ethnicity, language, or health literacy (Li et al., 2023).

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Appendix A: Invitation to Participate

From: Belinda Okoruwa, DNP Student
Date: 08/26/2025
To: Clinical Staff -Outpatient Mental Health Clinic

Subject: Educational QI Project on Long-Acting Injectable (LAI) Antipsychotics

Dear Clinical Colleagues,

My name is Belinda Okoruwa and I am a DNP candidate at Walden University. With approval from the clinic leadership, I invite you to participate in a brief quality-improvement education project titled "**Enhancing Providers' Knowledge of Long-Acting Injectable Antipsychotics Through Structured Education in Outpatient Mental Health Settings.**" The project's goal is to provide a short educational intervention that will increase clinical staff knowledge and confidence in the appropriate use of LAI antipsychotics for patients with schizophrenia-spectrum disorders. Participation involves completing a short pre-training questionnaire, reviewing the provided educational materials attached to this email, and completing a post-training questionnaire. Your responses are confidential and will be anonymized for analysis. After completing each paper questionnaire, please print out and place it in a sealed envelope and drop it in the secure collection box at the front desk. If you have questions about the project or materials, please contact me at belinda.okoruwa@waldenu.edu. I appreciate your time and willingness to help improve care for our patients.

Thank you for your participation.
Sincerely,
Belinda Okoruwa, DNP Student
Walden University

Appendix B: Pre and Post Questionnaire Survey

This short survey asks how much you know and how confident you feel about using and talking with patients about long-acting injectable antipsychotics. Please answer honestly and your responses will be kept anonymous and only reported as group results.

- Participant ID Number (Please create by using random letters as 2 initials and include the last 4 digits of your phone number e.g.,)
- Role
 - RN []
 - LPN []
 - PMHNP []
 - FNP []
 - Mental health therapist []
 - MD []
 - Other: _____
- Years in outpatient MH practice
 - <1 []
 - 1-3 []
 - 4-10 []
 - >10 []

In items 1-5, please respond based on your level of agreement

	Not at all 1	Somewhat 3	Very Much 5
1. Do you think you have adequate knowledge on LAIs antipsychotics?			
2. Do you think you are able to conduct screening to identify patients who need LAIs?			
3. How confident are you in explaining the clinical advantages and risks of LAIs to patients?			
4. How confident are you in safely preparing and administering the LAI formulations used at our clinic (or supervising staff who do)?			
5. How likely are you to offer LAIs to eligible patients after discussing them (i.e., how willing are you to recommend or refer them)?			

Please select the best answer

1. True / False: Long-acting injectable (LAI) antipsychotics provide more consistent medication delivery compared with daily oral antipsychotics.
 True False

2. Multiple choice: Which of the following is a demonstrated clinical benefit of LAI antipsychotics?
 A. Reduced need for daily pill taking and improved adherence
 B. Universally fewer side effects than all oral options
 C. Guaranteed cost savings for every patient
 D. Elimination of need for clinical follow-up

3. True / False: LAIs should only be offered as a “last resort” after many relapses; they are never appropriate for early-phase schizophrenia.
 True False

4. Multiple choice: Some LAIs are given intramuscular (IM) while others may be given subcutaneously (SC). Which statement is most accurate?
 A. All LAIs are IM only.
 B. All LAIs are SC only.
 C. Different products use different routes (IM or SC); route depends on the product.
 D. Route doesn't matter, just administer wherever convenient.

5. Multiple choice: When a product is supplied as a lyophilized powder, the most important preparation step is:
- A. Reconstitute per manufacturer instructions before administration
 - B. Inject faster to reduce pain
 - C. Store at room temperature regardless of label
 - D. Shake vigorously right before injection
6. Short scenario (multiple choice): Mr. A is a patient with a history of schizophrenia, and he frequently misses oral doses and had one recent ER visit for relapse. During follow-up you and the patient discuss options. The best next step is:
- A. Increase the oral dose without discussing adherence causes
 - B. Discuss LAI as an option using shared decision-making and review pros/cons with the patient
 - C. Discharge the patient for nonadherence
 - D. Immediately start clozapine
7. Multiple choice: Which of the following is a modifiable barrier that structured provider education can most directly address?
- A. Patient needle aversion
 - B. Clinician knowledge and confidence about LAIs
 - C. Drug cost and insurance formulary rules
 - D. Geographic distance to clinic